Environment

IN THIS SECTION

According to the World Economic Forum Global Risks Report 2022, climate action failure, extreme weather, biodiversity loss, natural resource crises and human environmental damage are the top five risks that will become a critical threat to the world over the next five to 10 years.

As members of a responsible mining community, we are committed to reducing our impact on the environment and returning it to conditions that are the same as or better than they were when we began operations. This includes preserving water quality, biodiversity and air quality as well as limiting our impacts on climate change through our GHG emissions and energy use during the Life of Mine.

"The greatest environmental challenge in mining is reducing emissions and accounting for climate change throughout the life of the mine. It's also an opportunity. Through teamwork and resourcefulness, New Gold can influence climate action by thinking outside the box and leading the industry."

Carolyn Winik
Senior Environmental Specialist, Rainy River

CLIMATE CHANGE

We know that climate change is one of the greatest challenges of our time and we are preparing our operations by developing adaptation and mitigation strategies and committing to climate-specific targets. There is no quick fix, and we are taking intentional steps to do our part and protect our people and operations against climate-related risks.

In 2021, we announced our commitment to reducing GHG emissions by 30 percent by 2030 (from 2020 baseline) through greater electrification and energy-reduction strategies. We are proud to publish our first TCFD Report, which provides the first public and detailed account of the way we manage climate change.

Read our TCFD Report >

Management

Overview

Through our materiality assessment, climate change was identified as one of the most important issues for our stakeholders, operations and industry. Discussions emphasized the importance of understanding and reducing New Gold's Scope 1 and 2 GHG emissions and progress on Scope 3. In addition, our scenario analysis identified climate-related risks to our operations. See our TCFD Report for more details on our climate change risks and opportunities.

Management Systems and Protocol

Both our operating sites are members of the Canadian Industry Partnership for Energy Conservation (CIPEC), committing to supporting the Government of Canada's goal of reducing emissions through energy efficiency. Rainy River and New Afton have energy and GHG management systems in place to ensure regular tracking and assessment of energy consumption and GHG emissions. Our performance monitoring identifies opportunities to improve energy performance, reduce GHG emissions and operating costs, comply with regulatory requirements, and promote awareness of energy conservation.

New Afton and Rainy River each maintain an Energy Management Policy. New Afton was the first mine in North America to be certified to the ISO 50001 Energy Management Standard and continues to maintain this certification and Rainy River's system is under development in line with ISO 50001 targets. Together, our policies and systems provide the foundation needed to integrate energy and GHG management practices into day-to-day operations, monitor and improve performance, manage compliance, and support continual improvement.

Rainy River and New Afton adhere to the MAC TSM Energy Use and GHG Emissions Management Protocol. New Afton achieved AAA scores on all indicators in 2021 and Rainy River reported at least level A for all indicators in its 2020 self-assessment.

Learn more about the TSM Energy Use and GHG Emissions Management Protocol >

Looking Ahead

To date, New Gold has focused on calculating, reporting and reducing emissions under our direct operational control and from the purchase of electricity. In early 2022, we identified and mapped Scope 3 emissions sources for our corporate office and plan to map the remainder of our value chain through the rest of the year. Our Scope 3 mapping is an important exercise toward meeting our climate goal of 30% reduction by 2030. We are conducting this exercise in alignment with Science Based Targets initiative and GHG Protocols technical guidance. This initiative presents an opportunity to identify further GHG reduction opportunities, partner with suppliers and contractors with similar sustainability standards and goals, and improve overall transparency.

Our Performance

Energy Reduction Initiatives

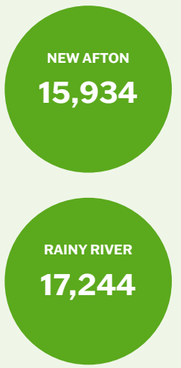
To support ongoing reduction efforts, both operating sites implement energy conservation and reduction initiatives.

For example, in December 2020, New Afton installed six Level 2 Battery Electric Vehicle (EV) charging stations. Since then, the site has supplied over 5,300 kWh to eight registered EVs in 350 charging events. This is equivalent to a GHG reduction of over 3,400 kg CO_2e.

The site also purchased a Sandvik LH518B battery electric loader which uses 20 percent of the energy of a diesel-driven equivalent and provides a proof of concept for future electrification of the mine operations fleet. At New Afton, 15,934 GJ of reductions in energy consumption were achieved as a result of conservation and efficiency initiatives.

Rainy River also completed energy saving initiatives. Our leach tank optimization project provides savings of 4,170 MWh, lighting retrofits across the site provide savings of 354 MWh/year, and an underground air compressor reprogram provides savings of 266 MWh/year. As a result, Rainy River reduced its energy consumption by 17,244 GJ from these initiatives. Further, Rainy River entered into the Independent Electricity System Operator's (IESO) Demand Response Program. This initiative supports grid reliability, affordability and sustainability in the Northwestern Ontario Electrical Zone. We continue to explore additional process optimization initiatives.

Reduction of Energy Consumption (GJ) as a Result of Conservation and Efficiency Initiatives



Analysts Corner

Disclosures and Indices Tags

GRI 302-103, 302-1, 302-3, 302-4, 305-103, 305-1, 305-2, 305-4, 305-5, EM-MM-110a.1, EM-MM-110a.2, EM-MM-130a.1

Sustainability Anchors

Environment

UN SDGs

Goal 13

Targets: 13.1

CLIMATE CHANGE CONTINUED

Energy Advocacy From Employees

Employees at New Afton are not just stepping up, they're also speaking up. Stemming from an employee suggestion, New Afton's mill coverall building was insulated and the tube heaters were replaced with high-efficiency alternatives. As a result, energy use decreased and employee comfort levels within the building improved, particularly in the winter. The project originated from an award-winning employee suggestion campaign and received half of its funding from FortisBC. By supporting energy-reduction efforts, our people play a central role in building climate resilience across the Company.

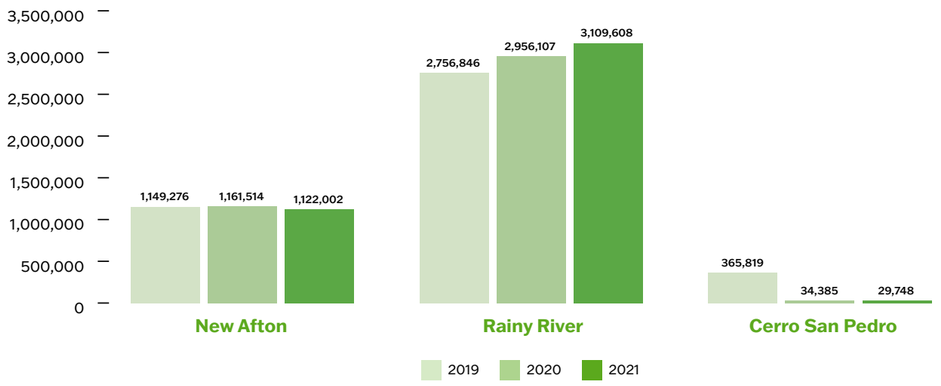
Energy and GHG Emissions Tracking

In 2021, New Afton reduced its energy consumption resulting in a reduction in Scope 1 GHG emissions. New Afton's Scope 2 GHG emissions increased due to a higher electricity emissions intensity factor. At New Afton, 73.6 percent of its electricity consumption—accounting for over 70 percent of the site's energy use — comes from the BC grid, which is considered green energy. Between 2020 and 2021, New Afton's energy intensity increased from 4.5 to 5.2 GJ/Au. Eq. Oz.

Rainy River had an increase in energy consumption, resulting in an increase in Scope 1 and 2 GHG emissions. This increase is due to a rise in the site's ore processing rate—a process that impacts electricity use—due to full recommissioning of operations and expansion of the pit. Between 2020 and 2021, Rainy River's energy intensity increased from 12.9 to 13.3 GJ/Au. Eq. Oz. We continue to explore reduction opportunities through biofuel and electrification options through the remaining open pit activities.

CSP had an increase in Scope 1 GHG emissions, which was driven by higher use of mobile equipment and fuel consumption to support the last phase of heap leach pad reclamation.

Total Energy Tracking (GJ)



ENERGY TRACKING WITHIN THE ORGANIZATION (GJ)

	New Afton		Rainy River		Cerro San Pedro	
	2020	2021	2020	2021	2020	2021
Fuels delivered	311,647	296,331	1,979,451	2,047,785	11,851	19,767
Electricity consumption	849,868	825,671	976,656	1,061,823	22,534	9,981

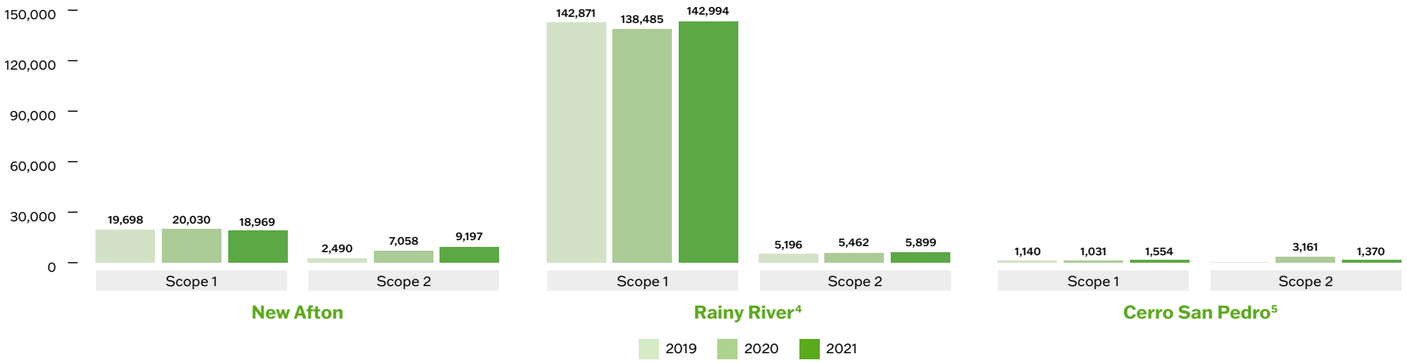
ENERGY INTENSITY RATIO (GJ/thousand tonnes)

	New Afton		Rainy River	
	2020	2021	2020	2021
Processed ore	209.9	229.6	335.2	336.2
Moved ore and waste*	190.6	231.6	50.5	49.7
Mined ore	190.6	250.9	251.0	214.2

*Currently operating in an open pit, Rainy River requires more tonnes of ore and waste to be moved than New Afton's underground operations.

CLIMATE CHANGE CONTINUED

Scope 1[2] and 2[3] GHG Emissions (tCO_2e)



New Afton has been consistently tracking Scope 1 and 2 GHG emissions. Rainy River began tracking Scope 1 and 2 in 2019, with additions to support more comprehensive tracking in 2020 and 2021, such as including additional process and waste emissions. Our Company reduction target baseline year is 2020 at which time both operating sites were consistently tracking emissions comprehensively.

TOTAL GHG EMISSIONS (tCO_2e)

	New Afton			Rainy River			Cerro San Pedro		
	2019	2020	2021	2019	2020	2021	2019[5]	2020	2021
Total (Scope 1 and 2)	22,188	27,088	28,166	148,067	143,947	148,893	1,140	4,192	2,924

GHG EMISSIONS INTENSITY

	New Afton		Rainy River	
	2020	2021	2020	2021
Mill (kg CO_2e/tonne milled)	4.9	5.8	16.3	16.1
Mine (kg CO_2e/tonne moved)	4.4	5.8	2.5	2.4

[2] Scope 1 emissions covered under emissions-limited regulations: New Afton (100%), Rainy River (59%), CSP (0%).
[3] New Afton's Scope 2 GHG emissions are location-based. Rainy River and CSP are market-based.
[4] Rainy River began tracking Scope 1 and 2 in 2019, with additions to support more comprehensive tracking in 2020 and 2021, such as including additional process and waste emissions.
[5] Scope 2 GHG emissions were not tracked at CSP in 2019.

CLIMATE CHANGE CONTINUED

Initiatives and Stories

Energy Management at New Afton

It was another successful year for energy and GHG management at New Afton. In December 2021, we passed our ISO 50001 Surveillance Audit. ISO 50001 is the system used to ensure continuous improvement of our energy and GHG performance. In addition, New Afton received an AAA rating, the highest rating possible, during an external verification of our compliance with the MAC TSM Energy and GHG Emissions Management Protocol.

To align with our journey toward a lower-carbon future, New Afton set a GHG-reduction objective and an energy objective in 2021. We exceeded our 2021 GHG-reduction objective by 107 percent and our energy objective by 273 percent.

The following actions helped us exceed our objectives:

- insulating the mill coverall building
- adding a battery electric loader to the B3 mining level
- reducing diesel consumption due to completion of tailings dam construction
- replacing a diesel heater with an electric heater for the core shack water tank
- reducing blower air use by adding crowders in the rougher flotation cells

In 2022, New Afton will be recertifying to ISO 50001, transitioning to the new MAC TSM Climate Change Protocol, and setting new energy and GHG objectives. Projects to help us achieve these objectives will include electric haul trucks, vent fan energy efficiencies, pumping energy efficiencies and upgrades to warehouse lighting.

Celebrating Earth Day at Rainy River

Throughout the year Rainy River undertook several initiatives to reduce our impact on the environment. From inspiring behavioural shifts through awareness campaigns to reducing electrical intensity of the mill, employees came together to take action and drive change.

In March 2021, we launched an employee-generated slogan and campaign to increase awareness of how our actions impact the environment. Together, the slogan “Digging into a More Efficient Tomorrow” and campaign—“SCREECH” (Stewards to Our Environment, Carbon Reductions, Renewable Rules, Energy Intensity, Efficiencies, Conservation, Health and Safety)—focused on ways to reduce GHG emissions caused by diesel consumption at Rainy River. Rainy River continues to look for opportunities to reduce diesel-based GHG emissions against a baseline of diesel consumption from 2019.

S Stewards to Our Environment
C Carbon Reductions
R Renewable Rules
E Energy Intensity
E Efficiencies
C Conservation
H Health and Safety

BIODIVERSITY AND LAND

We recognize that protecting biodiversity and sustaining healthy ecosystems is fundamental to responsible mining.

From early exploration and planning through to eventual closure, we encourage biodiversity initiatives through research, partnerships and land management processes. Site teams regularly collaborate with Indigenous partners through joint environmental monitoring programs and reclamation planning to ensure traditional knowledge is being incorporated where possible. These programs are outlined in our Impact Benefit Agreements (IBA) at Rainy River and our Cooperation Agreement (CA) at New Afton.

Management

Overview

We take a collaborative approach to environmental monitoring through the Environmental Monitoring Board made up of both community and New Gold members. As much as possible, we incorporate traditional knowledge into our monitoring programs, respecting the shared knowledge of partners.

Policy and Industry Protocol

To protect biodiversity, we apply a proactive risk-management approach throughout the LOM. Our Sustainability and Safety Policy outlines our commitment to minimizing impacts and preventing harm to the environment across all sites. We also integrate biodiversity and conservation into the decision-making process when reviewing business development opportunities.

This approach is a central part of our due diligence to ensure effective reclamation of disturbed ecosystems. As a member of MAC TSM, all three of our sites implement biodiversity management plans as required by the Biodiversity Conservation Management Protocol (BCMP).

In 2021, New Afton received two AAA scores and one AA score on its external validation of the BCMP and Rainy River reported at least level A on all three indicators based on its 2020 self-assessment. Consistent with requirements, we receive external reviews every three years to confirm our level of adherence to the BCMP and support continual improvement. At each site, the environmental manager and general manager are responsible for implementing the protocol's requirements.

Learn more about the TSM Biodiversity Conservation Management Protocol >

Management System

Both Rainy River and New Afton implement environmental management systems and New Afton is ISO 14001 certified. CSP also implements a biodiversity management plan and has been ISO 14001 certified since 2008. CSP's environmental management system considers soil and biodiversity conservation and monitoring, and reforestation and reclamation, as well as standard operating procedures.

While none of our sites are located near areas that are protected or have been identified as having high biodiversity value, we take action to maintain the habitats we impact at baseline conditions or better.

New Afton

The New Afton team experienced another year of relentless forest fires with BC having one of the worst fire seasons in recent history compounded by record high temperatures. New Afton Fire & Mine Rescue provided assistance to BC wildfire fire management programs with a focus on the Kamloops area.

Rainy River

Rainy River comprises over 1,800 hectares (ha) of terrestrial habitat and over 25 ha of aquatic habitat in the form of constructed fish habitat. In 2018, the site rehabilitated two Bobolink Overall Benefit Areas, which are now fully functioning.

Where we have challenges meeting our targets, we work with the appropriate regulatory bodies to course correct.

All of our sites implement a biodiversity management plan.

Analysts Corner

Disclosures and Indices Tags

GRI 304-103, 304-1, 304-2, 304-3, 304-4, G4-MM1, G4-MM2, EM-MM-160a.1, EM-MM-160a.3

Sustainability Anchors

Environment

UN SDGs

Goal 12

Targets: 12.2

Goal 15

Targets: 15.1, 15.5

BIODIVERSITY AND LAND CONTINUED

Our Performance

In 2021, 18 ha of land were disturbed and 145 ha of land were rehabilitated across our operations. As this largely relates to active reclamation and sites in care and maintenance, our reclamation efforts will increase over time until the operations are complete.

AMOUNT OF LAND DISTURBED OR REHABILITATED (ha)			
	New Afton	Rainy River	Cerro San Pedro
Total land disturbed and not yet rehabilitated (opening balance)	377	3,004	208
Total amount of land newly disturbed within the reporting period	1	17	0
Total amount of land newly rehabilitated within the reporting period to the agreed end use	0	15	130
Total land disturbed and not yet rehabilitated (closing balance)	378	3,006	78

INTERNATIONAL UNION FOR CONSERVATION OF NATURE (IUCN) RED LIST SPECIES AFFECTED (#)			
	New Afton	Rainy River	Cerro San Pedro
Critically Endangered	0	0	1
Endangered	0	0	1
Vulnerable	0	2	0
Near Threatened	0	23	2
Least Concern	4	596	16

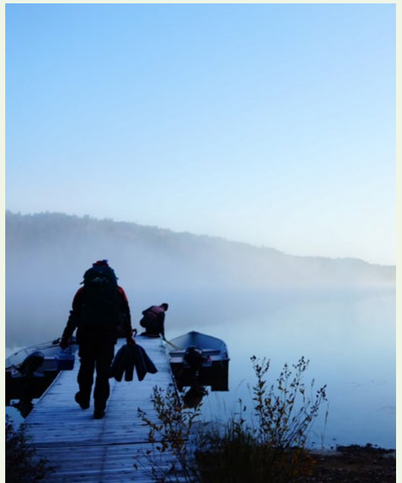
At Rainy River Mine, the number of species and their risk ratings was determined by reviewing baseline data gathered during our Environmental Assessment. Figures in the above table include all species of terrestrial, avian and aquatic wildlife, and all plant species observed or expected to exist within the potential influence of Rainy River Mine. New Afton and CSP do not include plant species ranked as least concern.

Initiatives and Stories

IISD Experimental Lakes Area

In 2020, New Gold signed a three-year agreement with International Institute for Sustainable Development (IISD) Experimental Lakes Area (ELA) to support the ongoing research on waterways in Northern Ontario. The ELA is a freshwater research facility located approximately two hours from the Rainy River Mine. The facility conducts research on water management, quality and controls as it relates to mining activities and contributes to regional and national water-management policy development. New Gold actively supports this research and the ELA team as they look for better ways to manage water quality, reduce water use and assess alternative management practices for tailing waste. New Gold and the ELA are partnered with numerous Indigenous communities in the area, and through this partnership, New Gold supports Indigenous youth and community members who participate in ELA activities.

Learn more about IISD ELA >



Erik Rissanen, Heavy Duty Mechanic at New Afton

A Moment of Resilience

New Afton Supports Front Lines in Wildfire Season

In 2021, BC saw a highly active wildfire season due to extremely hot temperatures and a dry climate. New Afton Fire & Mine Rescue responded to the crisis by employing fire prevention measures on site and stepping up to support local communities. Our actions not only strengthened our crisis response skills, they also deepened our relationships with Indigenous and community partners.

On July 1, 2021, New Afton was called by the City of Kamloops to honour our mutual aid agreement and assist in firefighting tactics during the Valleyview/Juniper fire. We provided an engine and a five-person crew to set up sprinkler systems and support to the City of Kamloops Fire Rescue.

Following the Valleyview/Juniper fire, we proactively prepared the New Afton Mine to minimize risks on site. Our Wildfire Technical Specialist assessed the site's readiness and crews developed fire breaks, staged equipment, implemented structural fire prevention measures and identified standby mine rescue staff throughout the summer.

The risk continued when the Spark Lake fire approached the community of one of our partners, Skeetchestn Indian Band. New Afton provided support to Skeetchestn's Emergency Operations Centre by sending our Emergency Response Coordinator and a Wildfire Technical Specialist to perform an assessment and offer support as required.

In addition, New Afton sent a fire engine and a four-person crew to respond to the Tremont Creek Wildfire and provide structural fire support to the District of Logan Lake, BC.

The team also responded to the Lytton Creek, Duffy Lake, Red Lake and Sicamous fires upon request from the Office of the Fire Commissioner and Kamloops Fire Centre.

TAILINGS

Any compromises to the structural integrity of tailings storage facilities can pose significant environmental risks. With potential impacts to human health, the environment and the economy, tailings dam failures have triggered mining industry reviews and the development of new and revised standards.

At New Gold, we comply with the MAC's updated Tailings Protocol as well as the CDA requirements. We also prioritize governance through an Independent Tailings Review Board (ITRB) that meets with both Rainy River and New Afton twice a year. We report our tailings performance against the GRI and SASB Mining and Metals standard.

Learn more about the SASB Mining and Metals standard >

The MAC TSM Tailings Management Protocol provides indicators to measure the quality and comprehensiveness of systems for tailings management. Consistent with requirements, we conduct internal reviews annually and receive external reviews every three years to confirm our level of adherence with the TSM Protocol.

Learn more about the TSM Tailings Management Protocol >

Management

Overview and Industry Protocol

Effective tailings management is business critical and important to our stakeholders. As part of our Sustainability Strategy, tailings management is a distinct topic for New Gold to champion.

Our tailings management Focus Area goal is to ensure compliance with MAC TSM Protocols and the CDA requirements. We regularly review post-closure tailings management strategies and are committed to continuous improvement. This commitment includes investing in external research and innovation around tailings management.

In 2021, New Afton achieved AAA scores on all five indicators of the TSM Protocol and Rainy River reported level A on two of the five indicators through its 2020 self-assessment. As a member of the CDA, New Gold also complies with CDA regulations for tailings management every year.

Description of Facilities

New Gold's operating sites—New Afton and Rainy River—have a total of three active tailings facilities, in addition to an inactive tailings facility at New Afton.

Learn more about the Tailings Facility Details >

Tailings tour at New Afton

At New Afton, waste rock is primarily non-acid-generating, with some metal leaching risk; however, any runoff stays within the pit capture zone and the waste rock is disposed of in accordance with its permit.

At Rainy River, a geochemistry risk is associated with the mining of overburden and waste rock. Tailings at Rainy River have delayed acid-generating potential; as such, the tailings at closure will be covered with water and overburden to prevent acid generation. Further, all potentially acid-generating rock is stockpiled in a designated area and will be covered with a layer of overburden and topsoil to prevent oxidization at the end of mine life.

MAC TSM Tailings Management Protocol Indicators

NEW AFTON
AAA
on all 5 indicators

Analysts Corner

Disclosures and Indices Tags

GRI G4-MM3, EM-MM-150a.1, EM-MM-150a.2, EM-MM-150a.3

Sustainability Anchors

Environment

UN SDGs

Goal 3

Target: 3.9

Goal 6

Target: 6.3

Goal 12

Target: 12.2

TAILINGS CONTINUED

Policy

New Gold implements a Tailings, Heap Leach and Waste Rock Facilities Management Policy, which outlines our commitments to identifying, assessing and controlling risks, training employees, and communicating with communities of interest (COI). New Gold's tailings management practices include the features specified in the accompanying table.

FEATURE	DESCRIPTION
Design	The designs for New Gold's tailings facilities are reviewed and updated throughout the construction and operations phases and include considerations for closure of each facility. The design of tailings facilities takes into account the climatic and ground conditions at each site. For example, our tailings facilities are designed to consider significant natural events, such as the probable maximum flood, so that the facilities are safe in the event of extreme weather or seismic events.
Financial security	Each site maintains financial security for the closure and post-closure monitoring of its tailings facilities. The financial security is based on approved closure plans, which are developed with stakeholder input.
Operations practices	Each site has an operations, maintenance and surveillance manual (OMS Manual), which sets out, among other things, how the site's tailings facilities will be operated and maintained to ensure that they function in accordance with their respective design performance objectives, as well as regulatory and corporate policy obligations.
Risk assessments	Each site conducts regular risk reviews that include tailings-related risks, the key results of which are reported to corporate management at least annually.
Engineer of Record	Each site has appointed a qualified external professional engineer and their firm to be the Engineer of Record for its tailings facilities.
Surveillance technology	Sites use surveillance systems, such as piezometers, inclinometers, remote sensing and other technologies to monitor tailings dams and water levels. The OMS Manual sets out early-warning trigger and alert levels, facilitating early identification and management of potential dam stability concerns.
Inspections by employees	The Company's tailings facilities are regularly inspected by trained New Gold employees—sometimes as frequently as several times a day.
Dam safety inspections	Formal dam safety inspections are conducted at least annually by the Engineer of Record. Recommendations made by the Engineer of Record are tracked to ensure follow-through by all employees.
Dam safety reviews	Each facility is subject to detailed third-party external dam safety reviews every five years, comprising a review of the design basis, construction and performance.
Independent reviews	The Company has an ITRB to provide independent, expert advice regarding the technical aspects of our tailings facilities. The ITRB meets at least twice per year to review information about tailings management practices at each facility.
Emergency preparedness	Each site has a detailed Emergency Response Plan, which is regularly reviewed and updated. The plans are also tested by employees to ensure response measures are effective and applicable.

TAILINGS CONTINUED

TAILINGS FACILITY DETAILS				
	New Afton			Rainy River
	New Afton Tailings Storage Facility	Pothook Pit Tailings Storage Facility	Historic Afton Tailings Storage Facility	Rainy River Tailings Management Area
Tailings facility	New Afton Tailings Storage Facility (TSF) consists of 5 starter dams that have now joined into 1 continuous structure. All dams reached their ultimate height in 2021.	Pothook TSF consists of 1 dam. The TSF is primarily used for tailings deposition during upset mill conditions.	Historic Afton TSF consists of 2 dams. Construction ceased in 1991.	Cell 1: TMA West Dam 5, TMA South Dam and Cell 1 Dam (internal); Cell 2 & 3: TMA North Dam, TMA West Dam 4 and TMA South Dam. Cell 2 and Cell 3 merged in 2021 and now are one cell. The internal Cell 1 Dam will be intentionally breached in 2022 providing one contiguous cell in late 2022.
Location	50.648308 N, 120.509096 W	50.653656 N, 120.501666 W	50.65000 N, 120.533333 W	Cell 1: 48.85757 N, 94.06726 W Cell 2 & 3: 48.869052 N; 94.060457 W
Construction method	Centreline construction	Downstream construction	Downstream construction	Centreline raise for the TMA perimeter dams, which include TMA South Dam, TMA West Dam and TMA North Dam
Design standard	CDA's Dam Safety Guidelines	CDA's Dam Safety Guidelines	CDA's Dam Safety Guidelines	CDA's Dam Safety Guidelines (2013), Ontario Mining Association
Status	Active	Active	Care and maintenance	Cell 1: Active Cell 2 & 3: Active
Current maximum height	56m	10m	70m	20.5m at South Dam
Current storage impoundment volume	30.5 million m^3	2.55 million m^3	27 million m^3	25.8 million m^3 (excluding pond volume)
Most recent dam safety inspection	October 2021	October 2021	October 2021	August 2020
Most recent dam safety review	2017	2017	2018	2021
Most recent ITRB and its tailings review	November 2021	November 2021	November 2021	October 2021
Hazard potential [6, 7]	Risk rating of Extreme[6]	Risk rating of Very High[6]	Risk rating of Extreme[6]	The TMA Dams (North, West and South) classified as Very High[7]

As of December 31, 2021

[6] In accordance with CDA Dam Safety Guidelines, Table 2-1 Dam Classification. Dam classification considers the risks posed by the structures, such as the population at risk and incremental losses—loss of life, environmental and cultural values, and infrastructure and economics.
[7] Using the Ontario Lakes and Rivers Improvement Act (LRIA) "Classification and inflow design flood criteria." This is generally equivalent to a CDA consequence of Extreme.

TAILINGS CONTINUED

Our Performance

TOTAL WEIGHT OF TAILINGS AND MINERAL PROCESSING WASTE (t)[8]				
	New Afton		Rainy River	
	2020	2021	2020	2021
Total weight	5,412,000	4,791,637	8,820,751	9,249,680

TAILINGS – COMPANY-WIDE (t)		
	2020	2021
Total tailings generated	14,232,751	14,041,317
Tailings to surface	14,232,751	14,041,317

New Gold's operating sites have zero in-pit tailings, sub-surface tailings or sub-sea tailings.

Jana Smith, Tailings Field Quality Supervisor at New Afton

[8] No tailings waste is recycled.

Initiatives and Stories

New Afton Thickened Tailings Technology

Our New Afton Mine is located in a semi-arid climate where annual evaporation rates typically exceed precipitation. As a result, traditional mine water recycling is challenging due to significant evaporated losses and is supplemented with a draw from Kamloops Lake. To mitigate this inefficiency, our team proposed the use of thickened tailings technology and completed a field scale pilot project in 2018. This technology allows immediate dewatering of tailings through a thickener and direct circulation to the mill to reduce tailings pore water and evaporative losses. In 2021, the mine continued to see progress on the construction of its Thickened and Amended Tailings (TAT) Plant, which will allow us to transition away from conventional slurry tailings.

Tailings Management Area South Dam Raise at Rainy River

In 2021, our Rainy River Capital Projects Team kicked off the Stage 3 dam raise at its TMA. As an integral part of the mine, the TMA is raised annually to maintain milling operations throughout the mine life. New Gold's construction team and external contractors raised the dam 1.2 metres in elevation, over a 7.2 kilometre distance. The raise required placement of roughly 4.4 million tonnes of material in accordance with strict specifications to ensure dam stability. Third-party consultants provided quality assurance on the placed material during construction and the site continues to monitor the dam and its instrumentation daily. Routine inspections by internal and external groups are also conducted to ensure the safety of the public and the environment.

Independent Tailings Review Board

The ITRB is an observational oversight body consisting of recognized senior experts in the areas of geotechnical engineering, hydrogeology and geochemistry. At New Afton, experts also include block cave induced subsidence. On a biannual basis, the ITRB meets with New Gold's technical staff and consultants over three days to review ongoing open pit mining, tailings management facility and waste stockpile design, construction, operation, maintenance, monitoring and long-term closure planning with particular attention to tailings and water management.

Following each meeting, the ITRB issues a report to New Gold's management that summarizes their findings and details their recommendations. The recommendations provide senior management and appropriate employees with expertise and advice on geotechnical, geochemical and hydrogeological issues. New Gold's Board and the ITRB also meet annually.

All recommendations made by the ITRB are managed in an action log to ensure responsibility is assigned, and the recommendations are followed to completion. Through the ITRB review and recommendations, New Gold continues to improve site practices toward operational excellence and best outcomes for our people, communities, partners and stakeholders.

Analysts Corner

Disclosures and Indices Tags

GRI 303-103, 303-1, 303-2, 303-3, 303-4, 303-5, EM-MM-140a.1, EM-MM-140a.2

Sustainability Anchors

Environment

UN SDGs

Goal 6

Target: 6.3

Goal 8

Target: 8.5

Goal 12

Target: 12.2

Goal 15

Targets: 15.1, 15.5

WATER

Water is the most vital natural resource on the planet and its responsible use intersects with global challenges such as climate change, biodiversity loss and human rights. Human pressure is the key force driving the use and distribution of global freshwater systems. Issues such as water stress and scarcity are expected to amplify due to other global challenges like climate change, biodiversity loss and human rights.

Water stewardship—prioritizing water management, water quality and water access—is a key part of our Sustainability Strategy; it provides important opportunities to take action and drive momentum on a local and global scale.

Management

Overview

Water is a key resource to the mining process and a shared resource with local communities. As such, we recognize the role we play and strive to enhance water stewardship across all operations.

Goals and Industry Protocol

Our Sustainability Strategy outlines our goal to strive for 100 percent recycled water in operations by 2030 and net neutrality in water consumption over our LOM by returning clean excess water to the environment. We annually measure our progress and develop work plans to achieve these goals. As of 2021, Rainy River, CSP and New Afton recycled 100,[9] 100 and 80 percent of their total water consumption, respectively.

New Gold endorses the TSM Water Stewardship Protocol, which sets out criteria to commit to water stewardship, implement a water management system, engage with other water users and set water-related objectives. New Afton achieved AA on the watershed-scale planning indicator and A on the other three indicators as part of its 2021 external verification. Rainy River reported at least level A on all four indicators as part of its 2020 self-assessment.

Learn more about the TSM Water Stewardship Protocol >

Policy and Programs

Our Sustainability and Safety Policy guides our commitment to water management by establishing water monitoring and stewardship programs through each mine's lifecycle. New Afton and Rainy River both implement water management and balance plans to address water stewardship during operations and closure. Site environmental departments carry out the requirements under these plans.

Our sites monitor water quality and quantity, including water treated and discharged, as applicable.

New Afton

Landscape and Operations

New Afton withdraws freshwater from Kamloops Lake, pumps tailings pore water from the Historic New Afton TSF, pumps seepage and groundwater from interception wells and pumps mine water. All water is used for processing ore, except for a small amount for drinking, instrumentation and fire suppression.

Water is maintained on site within the TSF or is lost to evaporation or concentrate moisture.

In 2021, New Afton constructed a TAT Plant to further water use efficiency. The TAT Plant aims to be operational in 2022.

Management System

Similar to Rainy River, New Afton has a comprehensive monitoring program, including modeling to predict future conditions. A site water balance is used to understand operational requirements and target areas where further investigation is required. To enhance water stewardship further, New Afton conducted a Human Health and Ecological Risk Assessment in 2021, which indicated a lack of off-site impacts.

Stakeholder Engagement

Each quarter, New Afton holds water update meetings with local First Nations to review water use and identify conservation opportunities. To improve transparency, New Afton worked with The Water Survey of Canada to establish a monitoring station on the Thompson River downstream of the mine site. The station provides publicly available data on water flows and temperatures.

The Thompson River watershed does not have water targets, but New Afton has identified a target of reducing freshwater consumption through the increased capture and recycling of mine-impacted waters. Projects that may impact water consumption, both positive and negative, always consider changes to the watershed.

Rainy River

Landscape and Operations

Rainy River collects and manages site runoff and seepage, and collects, treats and discharges water to the environment, in accordance with provincial and federal requirements. The site does not withdraw water directly from a river or lake. Instead, water from the pit dewatering and rainfall that collects within the site is used for the mill, and excess water is treated and discharged to Pinewood River.

Management System

Rainy River has a robust water management strategy focused on water level, water quality and water balance. To meet its monthly and annual discharge targets and guide operational decision making, Rainy River uses a water balance model. The model is updated monthly and used to inform short- and long-term predictions associated with water management.

The site also has a water balance dashboard to monitor measured and model-predicted conditions. In 2021, all water management ponds operated below the normal operating water level thanks to insights from the dashboard.

To drive progress, Rainy River sets annual goals and objectives and conducts groundwater sampling three times a year from wells located on and around the mine site, in addition to monthly sampling of natural water bodies around the mine site.

[9] 77 percent represents water recycled from the Tailings Management Area for ore processing; the remaining 23 percent is contact water collected on site. As Rainy River does not withdraw water directly from water bodies, 100 percent of the water used for ore processing comes from contact water collected from on site and recycled water from the TMA.

WATER CONTINUED

Stakeholder Engagement

Rainy River implements Environmental Monitoring Boards (EMB). EMBs are regular meetings organized by New Gold as an opportunity to provide community members with project updates and environmental monitoring and sampling information. These EMBs also provide a forum for Indigenous community stakeholders to share feedback and traditional knowledge as it relates to water and environmental stewardship.

Cerro San Pedro

CSP is a zero-discharge operation and uses freshwater from groundwater; the water used in operations is recirculated. The site measures monthly extraction, recirculation, evaporation and consumption volumes in accordance with regulatory requirements. Supported by the site's environmental management system, CSP establishes annual water management objectives and measures progress against each objective every month.

Our Performance

WATER INTENSITY (L/oz gold equivalent produced)

	New Afton			Rainy River		
	2019	2020	2021	2019	2020	2021
Water intensity	10,991	13,697	15,343	7,924	9,580	10,004

TOTAL WATER WITHDRAWAL (megalitres)

	New Afton		Rainy River		Cerro San Pedro	
	2020	2021	2020	2021	2020	2021
Surface water	2,800	2,700	3,020	2,953	0	0
Groundwater	0	0	1,095	1,716[10]	66	57
Total	2,800	2,700	4,115	4,669	66	57

TOTAL WATER DISCHARGE (megalitres)

	New Afton		Rainy River		Cerro San Pedro	
	2020	2021	2020	2021	2020	2021
Surface water	0	0	1,648	2,013	0	0

WATER CONSUMPTION (megalitres)[11]

	New Afton		Rainy River		Cerro San Pedro	
	2020	2021	2020	2021	2020	2021
Total water consumption from all areas	2,800	2,700	2,234	2,358	66	57
Change in water storage	N/A	N/A	233	298	N/A	N/A

[10] Rainy River extracts ground water from the dewatering well around the pit for slope and pit walls stability.
[11] 100 percent of the water consumption from CSP is from areas with water stress. No freshwater is withdrawn or consumed from regions with High or Extremely High Baseline Water Stress at Rainy River or New Afton.

WATER CONTINUED

Rainy River experienced one incident of non-compliance in 2021 due to discharge that exceeded the daily limit; however, no formal enforcement action was taken. There were no instances of non-compliances associated with water quality permits, standards and regulations at New Afton, Rainy River or CSP.

WATER IMPACT – COMPANY-WIDE (megalitres)		
	2020	2021
Total freshwater withdrawal	6,981	7,426
Total water discharge	1,648	2,013
Total water consumption	5,333	5,413

Initiatives and Stories

New Gold and the University of Toronto's Water Stewardship Innovation Projects

In 2021, New Gold supported the University of Toronto's Water Stewardship Innovation Projects (WSIP) in their research on water management and stewardship practices across the mining industry. New Gold was one of many mining companies to participate. Through this participation, we have established a strong relationship with the University and will continue to support the WSIP in 2022 and beyond.

WATER STEWARDSHIP INNOVATION PROJECTS
UNIVERSITY OF TORONTO

Sitotaw Yirdaw, Senior Water Resources Engineer at Rainy River

Robust Water Management at Rainy River

Until fall 2021, Rainy River experienced dry weather conditions with very few months registering normal or above normal precipitation—conditions that limit a mine's ability to discharge water to the environment. Although the site experienced drought-like conditions early on, Rainy River finished the year with a total discharge of 2.01 million m^3 of water to the Pinewood River.

This reduced excess water inventory on site and represented a success for water management in compliance with Rainy River's process water treatment systems. The ability to treat and discharge water is crucial to ensure the continued operations of the mine.

"Demonstrating resilience in water management is about building the capacity to discharge compliant water to the environment when there is excess water on site. It's about thinking ahead by storing enough water for continuous mine operation during periods of drought and maximizing water recycling for mil processing," says Siotaw Yirdaw, Senior Water Resources Engineer at Rainy River.